

MILL RIVER HABITAT RESTORATION PROJECT

TAUNTON MASSACHUSETTS

Project Summary

Project Description

The Mill River has been recognized as an important resource that has great habitat restoration potential not only for anadromous fisheries but for river and riparian habitat as well. With spawning areas in Lake Sabbatia and Winecunnet Pond, an alewife run above 100,000 is possible. Fish passage will also allow for the potential of an additional 37 miles of stream and pond habitat to be reconnected. While the ultimate goal is to reconnect fish habitat in the upper reaches of the watershed, the project will be taking a holistic look at the restoration of an urban river. This includes looking at flooding and safety issues, historic issues, recreational opportunities and sediment quality. We expect to be working within the constraints of an urban setting and a legacy of industrial uses of the river. The project is currently in the feasibility and alternatives analysis phase, focused on the area between Morey's Bridge and the Taunton State Hospital.

Project Background

The Mill River in Taunton runs from Lake Sabbatia to its confluence with the Taunton River near the Weir Village. The watershed extends above Lake Sabbatia and includes the Snake River and Winneconnet Pond which is fed by the Canoe River and Mulberry Meadow Brook in Norton. The Snake River is hydrologically linked with the Hockomock Swamp, the largest freshwater wetland complex in Massachusetts and an Area of Critical Environmental Concern. Before the early 1800s when the upper dams were built, Lake Sabbatia was called Skattings Pond and was 120 acres in size. With the addition of dams at Bay Street and at the Whittenton Mill, Lake Sabbatia has grown to 266 acres.

Early settlers were drawn to the Mill River because of reports that included the abundant fisheries available. The first settlement was at Cohannet, which was the name given to the falls on the Mill River where Native Americans would camp by the hundreds every April to harvest fish for the year. Reports of fish filling the river to its banks were common, and the first settlers closely guarded the fishery. Early on, Taunton gained the reputation for being the "Herring Town". The first grist mill on the river was built at Cohannet soon after settlement and despite the protests of local farmers and settlers, the Mill River lost its most abundant resource. It was reported that because of the loss of the fish for fertilizer, Taunton farmers were forced to purchase corn when they had previously had plenty of corn for themselves with enough left over for sale.



The City of Taunton developed into an industrial manufacturing and shipbuilding city. After losing its herring run, Taunton soon became known as "Silver City" for the abundant jewelry manufacturing taking place along the Mill River. The river has been left with a legacy of pollution and industrial development, but recent efforts at solving stormwater issues and redeveloping mill buildings has led to greater interest in restoration of the Mill River and its fishery. The lower reaches of the river continue to maintain good riparian habitat and the presence of American eels and potential for anadromous fisheries restoration make this an excellent opportunity.

Dams on the Mill River

There are currently four dams on the Mill River. Taunton recently gained national attention when the dam at the Whittenton Mill, built in 1832 failed during a storm in October, 2005. Portions of the wooden dam structure were removed during the emergency by the Army Corps of Engineers and the USDA Natural

Resources Conservation Service through their Emergency Watershed Program (EWP). The dam was replaced with two large culverts and rock rubble from a nearby quarry. The NRCS spent \$200,000 to replace this dam. As a result of this incident, talks were started with the owners of all the dams on the river to assess the possibility of dam removal and river restoration.

Taunton State Hospital Dam

The first dam on the river is owned by the Department of Public Health (DPH) and is part of the Taunton State Hospital. It is no longer in use, and is not visible from any roads. The dam is 5.5 feet high and creates a very small impoundment just below the Reed and Barton manufacturing plant. The site includes an old mill foundation, associated raceway and other structures. There is likely poor sediment quality in the impoundment due to silver manufacturing directly upstream. The DPH is interested in pursuing removal at this site.



Reed and Barton – West Britannia Dam

This small dam is located above the mill at the Reed and Barton manufacturing plant. The dam helps to divert water into a millrace that extends through the mill buildings and contains a secondary dam within the mill itself. Neither dam is used in the manufacturing process. The West Britannia Dam is 3.5 feet high and impounds little water due to accumulated sediment. Fish passage could be an alternative at this site if Reed & Barton is not interested in dam removal.

Whittenton Mill Dam

This dam has been lowered about five feet from an original height of 12 feet. The new structure consists of rock rubble drained by two culverts. This dam and the dam at Morey's Bridge serve to regulate water in the Mill Pond and Lake Sabbatia. If the upper dam is repaired, it may be possible to remove or modify this dam to create a fishway while maintaining the impoundment at the lake. The mill owner is working on a residential redevelopment and is also concerned about aesthetics and maintaining good relations with the neighborhood. A natural fish passage option could improve aesthetics and provide a scenic amenity at this site.



Morey's Bridge Dam

The Morey's Bridge Dam is under the same ownership as Whittenton Mill Dam, and serves as the outlet of Lake Sabbatia. The dam is currently in very poor condition. The owner has plans to restore the dam to maintain the level of Lake Sabbatia, which has significant recreational use. Property owners around the lake have expressed concern over this dam and the loss of water in the lake. In its current condition, the

dam does not pose a barrier to fish passage, but fish passage would need to be considered in reconstruction plans. In order to create adequate spillway capacity, the bridge will eventually need to be replaced and the spillway reconstructed.



Project Partners to date

Southeastern Regional Planning and Economic Development District (SRPEDD)

City of Taunton

Taunton River Watershed Alliance

The Nature Conservancy

Save The Bay

NOAA Restoration Center

Massachusetts Division of Marine Fisheries

Massachusetts Riverways Program, Department of Fish and Game

Massachusetts Department of Mental Health

Jefferson Development Partners

Project Steps and Timeline

Technical Advisory Committee and Fundraising

The project partners have met as a group a few times within the last year to plan fundraising and support for a feasibility study. All the dam owners have participated in these meetings. The partners recently secured a grant for \$25,000 from American Rivers/NOAA and have a match of \$25,000 pledged from Jefferson Development for the feasibility study. This money will be combined with state and other agency funding to complete the study.

Feasibility Study

The project partners are currently conducting a feasibility study for restoration of the Mill River from Lake Sabbatia to the State Hospital. The feasibility study will include cost estimates and conceptual designs for alternatives at each site including full removal of structures, breach of structures or other fish passage alternatives. The study will also look at channel restoration options, sediment quality and quantity, historical and community issues.

Citizen Advisory Group

As part of the restoration project, Riverways will be helping to facilitate a Citizen Advisory Group. The CAG will consist of city officials, residents and local groups and will help the project partners to understand local needs and issues including safety, recreation and scenic quality. We will work with the citizen advisory group to help them understand what makes a healthy river so that they can foster stewardship within the city neighborhoods.

Project Alternatives

As part of the feasibility study, the engineers will present a set of alternatives for restoration of the Mill River. We expect to have a final report this coming fall. The project partners will then work with the dam owners, city and other stakeholders to determine the best approach. We will take input from all stakeholders, but the ultimate decision will remain with the dam owners.

Project Design and Permitting, Fundraising

When alternatives have been chosen, we will have a better understanding of how to move forward on the project. Costs will be determined largely by sediment quality and quantity and the extent of restoration needed. Historical issues will be addressed at each project site and permits will be obtained. Design and permitting will likely take place in stages, with the restoration of one site at a time. Fundraising will need to be conducted at this stage as well for final engineering and permitting.

Construction

Construction of any chosen alternatives will take place as funding and permits allow. We will work with the dam owners to determine when and how construction will take place.